Measure Information Template (JH-6)

Category: Nonresidential – lighting.

Description: Require automatic daylit zone lighting control per Seattle Energy Code Section 1513.3.
(1) Title 24, Part 6, Section 131. Lighting Controls that Must be Installed:
Require automatic daylit zone lighting – either stepped dimming or continuous dimming.
Achieves additional energy savings by reducing electric lighting when daylighting is available.
- Note that proposal allows either stepped (lamp-by-lamp within a fixture) or continuous dimming.
- Also note that proposal applies to small perimeter rooms as well as to a large open space along the perimeter, but allows all the lights in contiguous rooms/zones to be controlled by one controlling device (i.e. it is not necessary to have a separate controlling device in each room) provided that these zones don't face more than two orientations.

Code Language Proposal:
- Title 24, Part 6, Section 131. Lighting Controls that Must be Installed (page 72).

Title 24, Part 6, SECTION 131
– LIGHTING CONTROLS THAT MUST BE INSTALLED

(revisions to subsection c only in this proposal, other subsections to remain unchanged)

c) **Daylit Areas.** All daylighted zones, both under overhead glazing and adjacent to vertical glazing, shall be provided with:

1. automatic controls which control the lights independent of general area lighting, and

2. either
   i. multi-level switching and with daylight-sensing automatic controls, which are capable of reducing the light level automatically and turning the lights off, or
   ii. dimming ballasts and with daylight-sensing automatic controls, which are capable of dimming the lights continuously and turning the lights off.

Contiguous daylight zones adjacent to vertical glazing are allowed to be controlled by a single controlling device provided that they do not include zones facing more than two adjacent cardinal orientations (i.e. north, east, south, west). Daylight zones under overhead glazing more than 15 feet from the perimeter shall be controlled separately from daylight zones adjacent to vertical glazing.

EXCEPTION 1 to Section 131 (c): Daylight spaces enclosed by walls or ceiling height partitions and containing 2 or fewer light fixtures are not required to have a separate switch for general area lighting.

EXCEPTION 2 to Section 131 (c): HID lamps with automatic controls that are capable of reducing the light level by at least 50% in lieu of continuous dimming controls.

EXCEPTION 3 to Section 131 (c): HID lamps 150 watts or less are exempt from the dimming requirements.

Benefits: Achieves additional energy savings by reducing electric lighting when daylighting is available.

Environmental Impact: Energy savings.

Type of Change: Mandatory.

Measure Availability and Cost: Daylight controls are widely available. Daylight controls are required by the Seattle Energy Code.

Useful Life, Persistance and Maintenance: Comparable to other controls.

Performance Verification: See companion change to Section 125.

Cost Effectiveness: Daylight controls are widely available. Daylight controls are required by the Seattle Energy Code. Cost can be spread over many zones as only one controlling device is required per orientation.

Analysis Tools: NA.

Relationship to Other Measures: NA.

Bibliography and Other Research: (1) Seattle Energy Code, Section 1513.3.